

Message Text

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PAGE 01 MOSCOW 06182 051509Z

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TAGS: TGEN, ENRG, PFOR, US, UR

SUBJECT: SCST ENERGY OFFICIAL ON PRESIDENTIAL ENERGY INITIATIVE, US-
SOVIET COOPERATION, AND CO-GENERATION (ELECTRICITY AND
DISTRICT HEATING)

REF: MOSCOW 5961

1. SUMMARY. SCST'S POWER AND ELECTRICAL ENGINEERING CHIEF HAS INDICATED: (1) INITIAL SOVIET REACTION TO PRESIDENTIAL ENERGY INITIATIVE IS THAT IT IS A GOOD PROGRAM AND "QUITE RATIONAL," ALTHOUGH DELAY OF FAST-BREEDER PROGRAM IS "NOT UNDERSTANDABLE," (2) THAT SOVIETS ARE READY TO CONTINUE COOPERATION WITH THE U.S. IN ENERGY, BUT WONDER IF AMERICANS HAVE LOST SOME INTEREST, AND (3) THAT PROGRAM OF CO-GENERATION OF ELECTRICITY AND STEAM WILL BE VERY IMPORTANT TO U.S. ENERGY CONSERVATION EFFORTS, AND SOVS ARE QUITE WILLING TO COOPERATE. END SUMMARY.

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PAGE 02 MOSCOW 06182 051509Z

2. DURING 28 APRIL MEETING WITH SCICOUNS, K.D. LAVRENNKO, CHIEF OF SCST'S POWER AND ELECTRICAL ENGINEERING DEPARTMENT, AND DR. YERMAKOV, IDENTIFIED AS BEING TECHNICAL EXPERT RESPONSIBLE FOR CO-GENERATION, PROVIDED WIDE-RANGING DISCUSSION OF SOVIET VIEWS AND PLANS IN ENERGY.

3. PRESIDENTIAL PROGRAM. LAVRENKO SAID THAT SOVIETS ARE VERY

INTERESTED IN PRESIDENT'S ENERGY PROGRAM AND THAT LAVRENNENKO HAS ALREADY READ MUCH ON IT. HE SAID THAT PROGRAM IS THE AMBITIOUS AND COMPREHENSIVE PLAN OF A VERY ACTIVE PRESIDENT, AND THAT THE EFFORTS

IN ENERGY CONSERVATION AND ECONOMY ARE PARTICULARLY INTERESTING FOR THE SOVIETS. HE DOES NOT UNDERSTAND THE CUT-BACK IN THE FAST-BREEDER REACTOR PROGRAM, HOWEVER.

4. U.S.-SOVIET ENERGY COOPERATION. LAVRENNENKO FEELS THAT ALL PARTS OF OUR BILATERAL ENERGY COOPERATION ARE WELL IN LINE WITH THE PRESIDENTIAL INITIATIVE, BUT CONFESSED TO HAVING FELT A RECENT COOLING OF INTEREST IN COOPERATION FROM THE U.S. SIDE. THE (SECOND ENERGY) JOINT COMMITTEE MEETING WAS NOT HELD, AND SPECIFIC COOPERATIVE PROGRAMS HAD ENCOUNTERED DIFFICULTIES. THE SOVIETS ARE VERY READY TO COOPERATE IN BOTH OLD AND NEW AREAS, BUT FIRST "IT MUST BE CLEARLY UNDERSTOOD" THAT ITEMS "SPECIFICALLY AGREED IN THE U.S. AND U.S.S.R. MUST BE CARRIED OUT." LAVRENNENKO SAID THAT "JOINT WORK SHOULD LEAD TO GREATER COOPERATION". (COMMENT. THIS WAS REFERENCE TO U.S. NON-DELIVERY OF CRYOGENIC REFRIGERATOR (08.02.07). NEWS HAS ALREADY GOTTEN OUTSIDE MINPOWER AND APPARENTLY AFFECTED ATTITUDE TOWARD IF NOT YET DECISION ON, COOPERATION WITH U.S. END COMMENT)

5. CO-GENERATION. IN ANSWER TO SCICOUNS QUESTION, LAVRENNENKO SAID THAT GIVEN CONSERVATION THRUST OF PRESIDENT'S MESSAGE, CO-GENERATION OF ELECTRICITY AND STEAM IS VERY APPROPRIATE UNDERTAKING FOR THE U.S. IF THEIR "AMERICAN COLLEAGUES ARE INTERESTED, THE SOVIETS ARE PREPARED TO SHOW" THEIR EXTENSIVE CO-GENERATION EXPERIENCE. LAVRENNENKO AND YERMAKOV PROVIDED FOLLOWING LIMITED OFFICIAL USE

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PAGE 03 MOSCOW 06182 051509Z

INFORMATION ON THE SOVIET PROGRAM:

(A) CURRENTLY 35 PER CENT OF SOVIET THERMAL PRODUCTION IS USED IN CO-GENERATION OF ELECTRICITY AND STEAM (FOR INDUSTRIAL AND DISTRICT HEATING). HENCEFORTH ALL NEW POWER FACILITIES WHOSE SITING ALLOWS IT MUST BE CO-GENERATIVE, AND SOVIETS EXPECT THIS TO MEAN THAT 50 PERCENT OF ALL NEW POWER CAPACITY IN THE EUROPEAN SECTOR WILL BE CO-GENERATIVE. (IN SIBERIA, HYDROPOWER STATIONS WILL LOWER THE CO-GENERATING PERCENTAGE.)

(B) NUCLEAR POWER STATIONS ON A NORTHERN PENINSULA (APPARENTLY THE BILIBINSKAYA 4-BLOCK STATION) AND AT BELOYARSK ARE ALREADY PRODUCING HEAT FOR THEIR NEIGHBORING VILLAGES. SOME NUCLEAR POWER PLANTS BUILT DURING THE CURRENT FIVE-YEAR PLAN WILL ALSO CO-GENERATE FROM TURBINE SPIN-OFF TO HEAT NEIGHBORING VILLAGES, AND THE NEXT FIVE-YEAR PLAN WILL CALL FOR EXTENSIVE PROGRAM OF NUCLEAR-FUELED CO-GENERATION. SOVS BELIEVE THERE REMAIN NO TECHNICAL PROBLEMS IN NUCLEAR CO-GENERATION; SOLE QUESTION IS SAFETY IN SITING DISTANCE FROM CITIES. (SOVS DID NOT MENTION BN-350, STEAM FROM WHICH

IS USED IN TURBINE AND IN MAKING DISTILLED WATER).

(C) SITING OF CO-GENERATION FACILITIES MUST BE 20-30 KM MAXIMUM FROM CITIES SERVED, NOT THE "HUNDREDS OF KILOMETRES" POSSIBLE IN CLASSIC ELECTRIC-ONLY FACILITIES.

(D) SOVS HAVE ACHIEVED GOOD RECORD ON HEAT LOSSES IN PIPES. AFTER 30 KM OF TRANSMISSION, 150-DEGREE INPUT IS REDUCED BY ONLY 3 DEGREES. FOR CO-GENERATION PLANTS WITHIN MOSCOW, TEMPERATURE LOSSES ARE TYPICALLY ONLY 1 DEGREE.

(E) SOVS BELIEVE THAT U.S. MUST GO TO CO-GENERATION IF OUR CONSERVATION EFFORT IS SERIOUS. THEY CALCULATE 33 PER CENT EFFICIENCY IN U.S. ALL-ELECTRIC PRODUCTION, WITH ONLY 27 PERCENT REACHING CONSUMER AFTER TRANSMISSION LOSSES; THEY CLAIM IN CO-GENERATION THAT AVERAGE 60 TO 64 PERCENT OF ENERGY REACHES CONSUMER, WITH UP TO 80 PERCENT POSSIBLE.

6. COMMENT. EVEN WITH ALL THE SOVIET EXPERIENCE AND ENTHUSIASM LIMITED OFFICIAL USE

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PAGE 04 MOSCOW 06182 051509Z

("NO TECHNICAL PROBLEMS"), SUCH COOPERATION WOULD NOT BE TO THE SOLE BENEFIT OF THE U.S. THE SOVIETS COULD CONCEIVABLY HAVE "SOLVED ALL THE PROBLEMS" WITHIN THE CO-GENERATING PLANTS THEMSELVES, BUT THEIR SYSTEMS ARE FAR FROM PERFECT; RESIDENTS OF MOSCOW ENDURE WEEK-TO-MONTH-LONG PERIODS DURING SUMMER "PIPE-CLEANING" PERIODS WITH NO HOT WATER. ONE DIPLOMATIC APARTMENT BUILDING SUFFERED FOUR SUCH SERVICE INTERRUPTIONS IN 1976, WITH THE LAST ACCOMPANIED BY COLD-WATER CUT-OFF AS WELL. END COMMENT. TOON

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